

**PRACTICE TEST 1 - CHAPTER 1 AND 2**Beginning and Intermediate Algebra by Messersmith, 4<sup>th</sup> edition**Evaluate. Express number in simplest form using integers or fractions:**

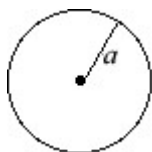
1.  $2 + 3(10 - 7)^3$

2.  $28 \div (4 - 2)^2 + 1 \cdot 6$

3. 
$$\frac{(5 + 7)^2 - 2^6}{8 \cdot 5 - 4 \cdot 7}$$

4. Find the perimeter of a rectangle with length 7 meters and width 5 meters. Include the correct units.

5. Find the area of a rectangle with length 9 feet and width 6 feet. Include the correct units.

6. Find the circumference of the circle if  $a = 16$  feet. Include the correct units. Use 3.14 for  $\pi$ .

7. Find the volume of a rectangular solid measuring 17 cm long, 7 cm wide, and 7 cm high. Include the correct units.

**Evaluate the expression:**

8. Evaluate the expression when  $d = \frac{-9}{8}$ ;  $16d - 11$

9. Evaluate the expression when  $a = 2$

and  $b = 1$ . 
$$\frac{a + 7b}{a - 5b}$$

**Simplify:**

10.  $9(m + 4)$

11.  $-3(-8a - 4b + 3)$

12.  $-5(p - 1) - (5 - 11p)$

13. Write a mathematical expression for the phrase and simplify, if possible. Let  $x$  represent the unknown quantity. The sum of twelve and twice a number.

14. Simplify each:

$$(-8)^2 = \underline{\hspace{2cm}} \qquad -6^2 = \underline{\hspace{2cm}}$$

**Simplify the expression. Write answers with positive exponents only:**

15.  $(6a^6)(-3a^9)(7a^7)$

16.  $\left(\frac{y}{4}\right)^3$

17.  $(3k^6)^2(3k^8)^2$

18.  $3vw^3(-v^4w^6)^2$

19.  $\left(\frac{-3}{2}d^7\right)^3(3d)^2$

20.  $\left(\frac{3}{2}t^9\right)^4\left(\frac{8}{9}t^4\right)^2$

24.  $\frac{p^{-10}}{q^{-12}}$

25.  $\frac{11t^8u^{-5}}{5v^{-7}w^2}$

26.  $\frac{33x^8}{36x^5}$

27.  $\frac{m^{-5}}{m^{-2}}$

28.  $\left(\frac{4r^4s}{7r^{-2}s^{-3}}\right)^2$

29.  $\left(\frac{4s^5}{t^6}\right)^{-2}$

30.  $(-ab^4c^7)^3\left(\frac{a^2}{bc}\right)^2$

**Simplify the expression. Write answers with positive exponents only:**

21.  $\frac{(-6k^8)^2}{(2m^2)^4}$

22.  $2^{-6}$

23.  $\left(\frac{5}{8}\right)^{-3}$

**MATH0361 Practice Test 1 Answers:**

1) 83

2) 13

3)  $\frac{20}{3}$

4) 24 m

5) 54 ft<sup>2</sup>

6) 100.48 feet

7) 833 cm<sup>3</sup>

8) -29

9) -3

10)  $9m + 36$

11)  $24a + 12b - 9$

12)  $6p$

13)  $12 + 2x$

14) 64, -36

15)  $-126a^{22}$

16)  $\frac{y^3}{64}$

17)  $81k^{28}$

18)  $3v^9w^{15}$

19)  $-\frac{243}{8}d^{23}$

20)  $4t^{44}$

21)  $\frac{9k^{16}}{4m^8}$

22)  $\frac{1}{64}$

23)  $\frac{512}{125}$

24)  $\frac{q^{12}}{p^{10}}$

25)  $\frac{11t^8v^7}{5u^5w^2}$

26)  $\frac{11x^3}{12}$

27)  $\frac{1}{m^3}$

28)  $\frac{16}{49}r^{12}s^8$

29)  $\frac{t^{12}}{16s^{10}}$

30)  $-a^7b^{10}c^{19}$